Admission Requirements

i. Bachelor in the field of Engineering or Engineering Technology with CGPA of 2.750 ; or
ii. Bachelor in the field of Engineering or Engineering Technology with CGPA of 2.500-2.749 with at least 3 years of working experience in relevant field ; or
iii. Bachelor in the field of Engineering or Engineering Technology with CGPA of 2.250-2.499 with at least 5 years of working experience in relevant field ; or
iv. Bachelor in any related field of Science or Technology with CGPA of 3.000 ; or
v. Bachelor in any related field of Science or Technology with CGPA of 2.750-2.999 with at least 3 years of working experience in relevant field ; or
vi. Bachelor in any related field of Science or Technology with CGPA of 2.500-2.749 with at least 5 years of working experience in relevant field.

Language Requirements

International candidates are required to fulfill English language requirement as follows:

a) 550 for TOEFL Paper-based Test (Academic Version); or
b) Band 6.0 for IELTS (Academic Training); or
c) 79-80 for TOEFL Internet-based Test (Academic Version).

Candidate without the requisite minimum score for TOEFL or IELTS may be granted a provisional admission. Such candidate will be required to pass an English Placement Test conducted by the University.

Fees

Fees	Master without thesis	
	Malaysian Student	International Student
Basic Fees (1st semester)	RM 1,250	RM 2,300
Basic Fees (2nd and subsequent semester)	RM 1,000	RM 2,050
Credit Fees * subject to change	RM 250 / credit	RM 400 / credit

APPLICATION

Please apply online via:

http://sgsportal.upm.edu.my:8080/sgsportal
www.sgs.upm.edu.my/prospective_students-2964

For further information, please contact :

DEAN
Faculty of Engineering
Universiti Putra Malaysia
43400 UPM Serdang
Selangor Darul Ehsan
Malaysia
Tel: (603) 9769 6262/6253
Email : dean.eng@upm.edu.my
Website: www.eng.upm.edu.my
www.facebook.com/engineeringupm

PROGRAMME COORDINATOR
Assoc. Prof. Dr. Fauzan Mohd Jakarni
Department of Civil Engineering
Faculty of Engineering
Universiti Putra Malaysia
43400 UPM Serdang
Selangor Darul Ehsan, Malaysia
Tel: (603) 9769 6390/4492/6378
Email: fauzan.mj@upm.edu.my
Website: www.eng.upm.edu.my/academic/postgraduate/master_by_coursework-2294

MASTER OF HIGHWAY AND TRANSPORTATION ENGINEERING

Department of Civil Engineering
Faculty of Engineering, Universiti Putra Malaysia

facebook.com/UniPutraMalaysia
@uputramalaysia
instagram.com/uniputramalaysia
youtube.com/user/bppupm

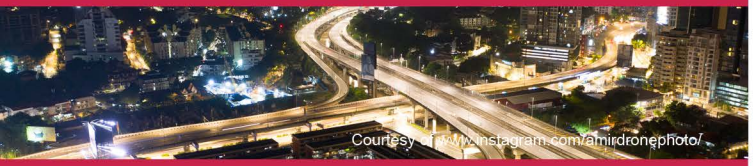
www.upm.edu.my

AGRICULTURE • INNOVATION • LIFE

BERILMU BERBAKTI
WITH KNOWLEDGE WE SERVE

INTRODUCTION

This programme is designed to train professionals to be knowledgeable and skilled in forming policies, planning engineering works and ensuring equity to the public at large. It is introduced to produce professionals in the field of transportation who are knowledgeable in the technical and policy issues in transportation, planning, design and control and management. This programme offers advanced knowledge in the topics of traffic, pavement and road safety engineering through the combination of lectures and hands on workshops.



PROGRAMME REQUIREMENTS

Credit Requirements for Graduation
Students enrolling under this programme must fulfill 40 credits of courses to graduate. The credit distributions for compulsory courses, elective courses and project are as follows:

- Compulsory Courses 24 credits
- Elective Courses 6 credits
- Dissertation 10 credits

Compulsory Courses
Students must take all the listed compulsory courses;

ECV5100	Research Methodology	3 credits
ECV5611	Accident Analysis and Prevention	3 credits
ECV5603	Advanced Transportation Engineering	3 credits
ECV5604	Advanced Highway Capacity Analysis	3 credits
ECV5605	Pavement Materials	3 credits
ECV5606	Pavement Analysis and Design	3 credits
ECV5607	Pavement Management System	3 credits
ECV5609	Highway Design	3 credits
ECV5990	Dissertation	10 credits

Note : ECV5990 – Dissertation is carried out over two semester

Elective Courses
Students must take only two elective courses (6 credits) out of the listed

ECV5602	Statistical Methods for Transportation	3 credits
ECV5608	Public Transport Analysis	3 credits
ECV5610	Railway System Engineering	3 credits
ECV5703	Construction Business Management	3 credits

Course Synopsis

ECV5100 | Research Methodology | 3 Credits
This course covers best practices in research such as research methodology, design and ethics as well as academic writing and oral presentations.

ECV5611 | Accident Analysis and Prevention | 3 Credits
This course covers the accident problems, diagnosis and measures to overcome accident black-spots problems and the implementation of road safety audit.

ECV5602 | Statistical Methods for Transportation | 3 Credits
This course covers scientific methods for collecting, organizing, summarizing, presenting, drawing conclusions and recommendation based on data analysis for transportation research.

ECV5603 | Advanced Transportation Engineering | 3 Credits
This course covers the concepts and technique of transportation management, freight transportation, transportation economics, relations to the environment, transport congestion, parking and public transport issue.

ECV5604 | Advanced Highway Capacity Analysis | 3 Credits
This course covers the use of traffic engineering studies as well as capacity analysis of freeway system, weaving segment, ramps, multi-lane and two-lane rural highways.

ECV5605 | Pavement Materials | 3 Credits
This course covers suitable pavement materials for road construction, asphalt rheology, uses, testing of asphalt mixtures, Portland cement concrete mixture, analysis of base, sub-base and subgrade materials.

ECV5606 | Pavement Analysis and Design | 3 Credits
This course covers pavement layers, interaction between pavement layers, axle loads on pavement, theory and concepts for pavement design, moisture induced damages on pavement, and design approach for airport pavement.

ECV5607 | Pavement Management System | 3 Credits
This course covers pavement performance, consideration of pavement evaluation techniques, management procedures of flexible and rigid pavements, exposure to the use of pavement management system software.

ECV5608 | Public Transport Analysis | 3 Credits
This course covers policy, regulation, management and operation of public transport to fulfil user demand. Cost-benefit analysis is also emphasized.

ECV5609 | Highway Design| 3 Credits
This course covers the fundamental principles of highway location design with focus on various traffic characteristics, survey and earthwork operations as well as geometric standards and design, and various alignment design.

ECV5610 | Railway System Engineering| 3 Credits
This course covers an overview of basic railway engineering elements and roles of rail transportation, history, organizations and economics, safety, intercity and urban passenger rail, freight operations, track-train dynamics, signals and communications, motive power and equipment, design of track components, construction and maintenance.

ECV5703 | Construction Business Management | 3 Credits
This course covers defining the minimum profit requirement of the construction project and finance liquidity requirements analysis for projects and construction companies. The course emphasises knowledge to prepare cost control management at the project level and the construction company.

ECV5990 | Dissertation | 10 Credits
This course involves a research or study by a student on a specific topic. It covers literature review, methodology, data collection and analysis under a supervision of a lecturer. A proposal report needs to be prepared at the beginning of the study. At the end of the project, the student will submit a complete dissertation and research output for evaluation. The student is also required to present the findings of the study to a panel of assessors.